

# Work Order ID 136727

Wednesday, September 02, 2015 2:45:40 PM

**\*136727\***

Page 1

Item ID: D2573 Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Saddle, Aft, Out  
 Start Date: 9/14/2015 Start Qty: 8.00 **\*8\*** Cust Item ID:  
 Required Date: 9/14/2015 Req'd Qty: 8.00 **\*8\*** Customer:  
 Reference:

Approvals: Process Plan: MLS Date: SEP 08 2015 Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_  
 Run Start **\*NR1\***  
 Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| Draw Nbr                       | Revision Nbr             |                      |         |        |              |               |               |                  |                |
| D2573                          | F                        |                      |         |        |              |               |               |                  |                |

100 0.00 **\*100\*** HAAS CNC VERTICAL MACHINING #1 **DAS 44 9-09 15/11/10**  
 HAAS 1 Memo 0.05  
 HAAS CNC vertical machine #1 Program Batch No. 136727  
 Double check by: JFC

1-Machine Step No 1 per Folio FA051 and inspect per attached Dimension Sheets

2-Machine Step No 2 per Folio FA051 and inspect per attached Dimension Sheets

3-Machine Step No 3 per Folio FA051 and insp

110 0.00 **\*110\*** CONVENTIONAL MILLING MACHINE **DAS 44 9-09 15/11/10**  
 Mill Conv Memo 0.01  
 Conventional Milling Machine Machine keyway as per dwg D2573 & D2574

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                              |                                                |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                       |                                                 |  |
|--------------------------------------------------------------|------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|--|-----------------------|-------------------------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ |                                                | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> |                                                            | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Thermoforming <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Cross tube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/><br/>           Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/><br/>           Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Quality <input type="checkbox"/><br/>           Other <input type="checkbox"/> </div> </div> |                                               |  |                       |                                                 |  |
| Date :                                                       |                                                | Step #:                                                                                                                                                                            |                                                            | QTY Effective :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  | MRB (QS1042) Approval |                                                 |  |
| Description Work Order Deviation                             |                                                |                                                                                                                                                                                    |                                                            | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                               |  |                       | Completed By                                    |  |
|                                                              |                                                |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                       | Lead hand / Supervisor<br>Approval Verification |  |
|                                                              |                                                |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                       | QC / QA Coordinator<br>Approval                 |  |
|                                                              |                                                |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                       |                                                 |  |
| Root Cause                                                   |                                                | FAULT CATEGORY                                                                                                                                                                     |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                       |                                                 |  |
| Environment <input type="checkbox"/>                         | No Re-verification <input type="checkbox"/>    | Pressure/Forced <input type="checkbox"/>                                                                                                                                           | Temperature/Cure <input type="checkbox"/>                  | Power Loss/Surge <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Positioned Wrong <input type="checkbox"/>     |  |                       |                                                 |  |
| Design <input type="checkbox"/>                              | Operator <input type="checkbox"/>              | Bending <input type="checkbox"/>                                                                                                                                                   | Set-up <input type="checkbox"/>                            | Folio/Program <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Outside Dimensions <input type="checkbox"/>   |  |                       |                                                 |  |
| Doc/Data <input type="checkbox"/>                            | Offset/Setup <input type="checkbox"/>          | Centre Not Concentric <input type="checkbox"/>                                                                                                                                     | BOM/Route <input type="checkbox"/>                         | Grain <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Over/Under tolerance <input type="checkbox"/> |  |                       |                                                 |  |
| Equip/Tooling <input type="checkbox"/>                       | Supplier <input type="checkbox"/>              | Cracks <input type="checkbox"/>                                                                                                                                                    | Broken/Damage/Defect <input type="checkbox"/>              | Weld <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Part Incorrect <input type="checkbox"/>       |  |                       |                                                 |  |
| Handling/Pre <input type="checkbox"/>                        | Training <input type="checkbox"/>              | Crimp/Kink/Ripple/Wave <input type="checkbox"/>                                                                                                                                    | Inspection Incomplete/Unqualified <input type="checkbox"/> | Wrong Stock Pulled <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Part Lost/Missing <input type="checkbox"/>    |  |                       |                                                 |  |
| Material <input type="checkbox"/>                            | Use for Testing <input type="checkbox"/>       | Cuffs <input type="checkbox"/>                                                                                                                                                     | Contamination <input type="checkbox"/>                     | Out of Sequence <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Part Moved <input type="checkbox"/>           |  |                       |                                                 |  |
| Internal Transport <input type="checkbox"/>                  | Poor Information <input type="checkbox"/>      | Crushing <input type="checkbox"/>                                                                                                                                                  | Countersink <input type="checkbox"/>                       | Off-set <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Drawing <input type="checkbox"/>              |  |                       |                                                 |  |
| Tribal Knowledge <input type="checkbox"/>                    | Rushing <input type="checkbox"/>               | Heat Treat <input type="checkbox"/>                                                                                                                                                | Cut Too Short <input type="checkbox"/>                     | Mislabeled <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Finish <input type="checkbox"/>               |  |                       |                                                 |  |
| LOA <input type="checkbox"/>                                 | Product Improvement <input type="checkbox"/>   | Wave/Twist in Tube <input type="checkbox"/>                                                                                                                                        | Instructions Incomplete/Unclear <input type="checkbox"/>   | Fit/Function <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Misread <input type="checkbox"/>              |  |                       |                                                 |  |
| Substation <input type="checkbox"/>                          | Process Improvement <input type="checkbox"/>   | Marks/Chatter <input type="checkbox"/>                                                                                                                                             | Drill Holes <input type="checkbox"/>                       | Misaligned/off center <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Turning Sequence <input type="checkbox"/>     |  |                       |                                                 |  |
| Past Expiry Date <input type="checkbox"/>                    | Manufacturing Process <input type="checkbox"/> | OTHER : _____                                                                                                                                                                      |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                       |                                                 |  |
| Misidentified <input type="checkbox"/>                       | Past Due <input type="checkbox"/>              |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                       |                                                 |  |

Wednesday, September 02, 2015 2:45:41 PM

**\*136727\***

Page 2

**\*N900040100\***

Setup Start \*NS1\*

Stop \*NS2\*

**Start Date:** 9/14/2015      **Start Qty:** 8.00      **\*g\***

**Cust Item ID:**

**Required Date:** 9/14/2015      **Req'd Qty:** 8.00      **\*O\***

**Customer:**

**Reference:**

**Approvals:**      **Process Plan:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Tooling:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Run Start \*NR1\*

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

**Insp.  
Stamp**

0.00

**\*120\***

QC

## Memo

0.00

## Quality Control

DAS  
44 157/11/10  
~~9-88~~

0.00

**\*130\***

QC

## Memo

0.00

## Quality Control

SL 15-11-17

0.00

**\*140\***

HandFinish

## Memo

0.01

## Hand Finishing

DAS 34 0.80

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

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| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>             Skid-tube <input type="checkbox"/><br/>             Machining <input type="checkbox"/><br/>             Thermoforming <input type="checkbox"/><br/>             Large Fab <input type="checkbox"/> </div> <div>             Cross tube <input type="checkbox"/><br/>             Small Fab <input type="checkbox"/><br/>             Finishing <input type="checkbox"/><br/>             Composite <input type="checkbox"/> </div> <div>             Water Jet <input type="checkbox"/><br/>             Prod. Eng. Coord. <input type="checkbox"/><br/>             Rec/Store/Packaging <input type="checkbox"/><br/>             Supplier <input type="checkbox"/> </div> <div>             Engineering <input type="checkbox"/><br/>             Quality <input type="checkbox"/><br/>             Other <input type="checkbox"/> </div> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                 |                       |  |
| Date : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Step #: _____                                                                                                                                                                      | QTY Effective : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                 | MRB (QS1042) Approval |  |
| Description Work Order Deviation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Disposition                                     |                       |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Completed By                                    |                       |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Lead hand / Supervisor<br>Approval Verification |                       |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | QC / QA Coordinator<br>Approval                 |                       |  |
| <b>Root Cause</b><br><div style="display: flex; justify-content: space-between;"> <div>             Environment <input type="checkbox"/><br/>             Design <input type="checkbox"/><br/>             Doc/Data <input type="checkbox"/><br/>             Equip/Tooling <input type="checkbox"/><br/>             Handling/Pre <input type="checkbox"/><br/>             Material <input type="checkbox"/><br/>             Internal Transport <input type="checkbox"/><br/>             Tribal Knowledge <input type="checkbox"/><br/>             LOA <input type="checkbox"/><br/>             Substation <input type="checkbox"/><br/>             Past Expiry Date <input type="checkbox"/><br/>             Misidentified <input type="checkbox"/> </div> <div>             No Re-verification <input type="checkbox"/><br/>             Operator <input type="checkbox"/><br/>             Offset/Setup <input type="checkbox"/><br/>             Supplier <input type="checkbox"/><br/>             Training <input type="checkbox"/><br/>             Use for Testing <input type="checkbox"/><br/>             Poor Information <input type="checkbox"/><br/>             Rushing <input type="checkbox"/><br/>             Product Improvement <input type="checkbox"/><br/>             Process Improvement <input type="checkbox"/><br/>             Manufacturing Process <input type="checkbox"/><br/>             Past Due <input type="checkbox"/> </div> </div> |                                                                                                                                                                                    | <b>FAULT CATEGORY</b><br><div style="display: flex; justify-content: space-between;"> <div>             Pressure/Forced <input type="checkbox"/><br/>             Bending <input type="checkbox"/><br/>             Centre Not Concentric <input type="checkbox"/><br/>             Cracks <input type="checkbox"/><br/>             Crimp/Kink/Ripple/Wave <input type="checkbox"/><br/>             Cuffs <input type="checkbox"/><br/>             Crushing <input type="checkbox"/><br/>             Heat Treat <input type="checkbox"/><br/>             Wave/Twist in Tube <input type="checkbox"/><br/>             Marks/Chatter <input type="checkbox"/> </div> <div>             Temperature/Cure <input type="checkbox"/><br/>             Set-up <input type="checkbox"/><br/>             BOM/Route <input type="checkbox"/><br/>             Broken/Damage/Defect <input type="checkbox"/><br/>             Inspection Incomplete/Unqualified <input type="checkbox"/><br/>             Contamination <input type="checkbox"/><br/>             Countersink <input type="checkbox"/><br/>             Cut Too Short <input type="checkbox"/><br/>             Instructions Incomplete/Unclear <input type="checkbox"/><br/>             Drill Holes <input type="checkbox"/> </div> <div>             Power Loss/Surge <input type="checkbox"/><br/>             Folio/Program <input type="checkbox"/><br/>             Grain <input type="checkbox"/><br/>             Weld <input type="checkbox"/><br/>             Wrong Stock Pulled <input type="checkbox"/><br/>             Out of Sequence <input type="checkbox"/><br/>             Off-set <input type="checkbox"/><br/>             Mislabelled <input type="checkbox"/><br/>             Fit/Function <input type="checkbox"/><br/>             Misaligned/off center <input type="checkbox"/> </div> <div>             Positioned Wrong <input type="checkbox"/><br/>             Outside Dimensions <input type="checkbox"/><br/>             Over/Under tolerance <input type="checkbox"/><br/>             Part Incorrect <input type="checkbox"/><br/>             Part Lost/Missing <input type="checkbox"/><br/>             Part Moved <input type="checkbox"/><br/>             Drawing <input type="checkbox"/><br/>             Finish <input type="checkbox"/><br/>             Misread <input type="checkbox"/><br/>             Turning Sequence <input type="checkbox"/> </div> </div> |                                                 |                       |  |
| OTHER : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                 |                       |  |

# Work Order ID 136727

Wednesday, September 02, 2015 2:45:41 PM

**\*136727\***

Page 3

Item ID: D2573 Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Saddle, Aft, Out  
 Start Date: 9/14/2015 Start Qty: 8.00 **\*8\*** Cust Item ID:  
 Required Date: 9/14/2015 Req'd Qty: 8.00 **\*8\*** Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

| Sequence ID/<br>Work Center ID                      | Operation<br>Description                                                                                                                                           | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty    | Reject<br>Number | Insp.<br>Stamp                   |
|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|---------|--------|--------------|---------------|------------------|------------------|----------------------------------|
| 150<br><b>*150*</b><br>Powdercoat<br>Powder Coating | White Gloss(Ref:4.3.5.1) per OSI005 4.3-Alum<br><i>m 133454.</i><br>Memo<br>START TIME: <i>10:50</i><br>OVEN TEMPERATURE: <i>320°</i><br>FINISH TIME: <i>11:20</i> | 0.00<br>0.00         |         |        |              | <i>8</i>      | <i>15-11-17.</i> |                  | DAS<br>34<br>9-89                |
| 160<br><b>*160*</b><br>QC<br>Quality Control        | QC3- Inspect Part Finish<br>Memo                                                                                                                                   | 0.00<br>0.00         |         |        |              | <i>(8)</i>    |                  |                  | DAS<br>38<br>9-89<br>NOV 17 2015 |
| 170<br><b>*170*</b><br>Packaging<br>Packaging       | Identify as per dwg & Stock Location: <i>S1398</i><br>Memo                                                                                                         | 0.00<br>0.00         |         |        |              | <i>8</i>      | <i>6</i>         |                  | NOV 17 2015<br>3-89              |

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

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| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                      | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>             Skid-tube <input type="checkbox"/><br/>             Machining <input type="checkbox"/><br/>             Thermoforming <input type="checkbox"/><br/>             Large Fab <input type="checkbox"/> </div> <div>             Cross tube <input type="checkbox"/><br/>             Small Fab <input type="checkbox"/><br/>             Finishing <input type="checkbox"/><br/>             Composite <input type="checkbox"/> </div> <div>             Water Jet <input type="checkbox"/><br/>             Prod. Eng. Coord. <input type="checkbox"/><br/>             Rec/Store/Packaging <input type="checkbox"/><br/>             Supplier <input type="checkbox"/> </div> <div>             Engineering <input type="checkbox"/><br/>             Quality <input type="checkbox"/><br/>             Other <input type="checkbox"/> </div> </div> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Date : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Step #: _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | QTY Effective : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | MRB (QS1042) Approval                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Description Work Order Deviation                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Completed By                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | QC / QA Coordinator Approval                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Root Cause                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | FAULT CATEGORY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Environment <input type="checkbox"/><br>Design <input type="checkbox"/><br>Doc/Data <input type="checkbox"/><br>Equip/Tooling <input type="checkbox"/><br>Handling/Pre <input type="checkbox"/><br>Material <input type="checkbox"/><br>Internal Transport <input type="checkbox"/><br>Tribal Knowledge <input type="checkbox"/><br>LOA <input type="checkbox"/><br>Substation <input type="checkbox"/><br>Past Expiry Date <input type="checkbox"/><br>Misidentified <input type="checkbox"/> | No Re-verification <input type="checkbox"/><br>Operator <input type="checkbox"/><br>Offset/Setup <input type="checkbox"/><br>Supplier <input type="checkbox"/><br>Training <input type="checkbox"/><br>Use for Testing <input type="checkbox"/><br>Poor Information <input type="checkbox"/><br>Rushing <input type="checkbox"/><br>Product Improvement <input type="checkbox"/><br>Process Improvement <input type="checkbox"/><br>Manufacturing Process <input type="checkbox"/><br>Past Due <input type="checkbox"/> | Pressure/Forced <input type="checkbox"/><br>Bending <input type="checkbox"/><br>Centre Not Concentric <input type="checkbox"/><br>Cracks <input type="checkbox"/><br>Crimp/Kink/Ripple/Wave <input type="checkbox"/><br>Cuffs <input type="checkbox"/><br>Crushing <input type="checkbox"/><br>Heat Treat <input type="checkbox"/><br>Wave/Twist in Tube <input type="checkbox"/><br>Marks/Chatter <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Temperature/Cure <input type="checkbox"/><br>Set-up <input type="checkbox"/><br>BOM/Route <input type="checkbox"/><br>Broken/Damage/Defect <input type="checkbox"/><br>Inspection Incomplete/Unqualified <input type="checkbox"/><br>Contamination <input type="checkbox"/><br>Countersink <input type="checkbox"/><br>Cut Too Short <input type="checkbox"/><br>Instructions Incomplete/Unclear <input type="checkbox"/><br>Drill Holes <input type="checkbox"/> | Power Loss/Surge <input type="checkbox"/><br>Folio/Program <input type="checkbox"/><br>Grain <input type="checkbox"/><br>Weld <input type="checkbox"/><br>Wrong Stock Pulled <input type="checkbox"/><br>Out of Sequence <input type="checkbox"/><br>Off-set <input type="checkbox"/><br>Mislabelled <input type="checkbox"/><br>Fit/Function <input type="checkbox"/><br>Misaligned/off center <input type="checkbox"/> | Positioned Wrong <input type="checkbox"/><br>Outside Dimensions <input type="checkbox"/><br>Over/Under tolerance <input type="checkbox"/><br>Part Incorrect <input type="checkbox"/><br>Part Lost/Missing <input type="checkbox"/><br>Part Moved <input type="checkbox"/><br>Drawing <input type="checkbox"/><br>Finish <input type="checkbox"/><br>Misread <input type="checkbox"/><br>Turning Sequence <input type="checkbox"/> |
| OTHER : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                   |

**Work Order ID 136727****\*136727\***

Page 4

Wednesday, September 02, 2015 2:45:41 PM

Item ID: D2573      Accept      \*N900040100\*      Setup Start \*NS1\*  
Revision ID:      Stop \*NS2\*  
Item Name: Saddle, Aft, Out  
Start Date: 9/14/2015      Start Qty: 8.00      \*8\*      Cust Item ID:  
Required Date: 9/14/2015      Req'd Qty: 8.00      \*8\*      Customer:  
Reference:

Approvals:      Process Plan:      Date:      Tooling:      Date:      Run Start \*NR1\*  
                 QC:      Date:      SPC (Y/N):      Date:      Stop \*NR2\*

| Sequence ID/<br>Work Center ID | Operation<br>Description                    | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|---------------------------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 180                            | QC21- Final Inspection - Work Order Release | 0.00                 |         |        |              |               |               |                  |                |
| *180*                          |                                             |                      |         |        |              |               |               |                  |                |
| QC                             | Memo                                        | 0.01                 |         |        |              |               |               |                  |                |
| Quality Control                |                                             |                      |         |        |              |               |               |                  |                |

MLJ      NOV 18 2015

MLJ      NOV 18 2015

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

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| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/>                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Thermoforming <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Cross tube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/><br/>           Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/><br/>           Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Quality <input type="checkbox"/><br/>           Other <input type="checkbox"/> </div> </div> |                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                  |                       |                                                 |  |
| Date :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Step #:                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | QTY Effective :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                  | MRB (QS1042) Approval |                                                 |  |
| Description Work Order Deviation                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                  |                       | Completed By                                    |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                  |                       | Lead hand / Supervisor<br>Approval Verification |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                  |                       | QC / QA Coordinator<br>Approval                 |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                  |                       |                                                 |  |
| <b>Root Cause</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>FAULT CATEGORY</b>                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                  |                       |                                                 |  |
| Environment <input type="checkbox"/><br>Design <input type="checkbox"/><br>Doc/Data <input type="checkbox"/><br>Equip/Tooling <input type="checkbox"/><br>Handling/Pre <input type="checkbox"/><br>Material <input type="checkbox"/><br>Internal Transport <input type="checkbox"/><br>Tribal Knowledge <input type="checkbox"/><br>LOA <input type="checkbox"/><br>Substation <input type="checkbox"/><br>Past Expiry Date <input type="checkbox"/><br>Misidentified <input type="checkbox"/> | No Re-verification <input type="checkbox"/><br>Operator <input type="checkbox"/><br>Offset/Setup <input type="checkbox"/><br>Supplier <input type="checkbox"/><br>Training <input type="checkbox"/><br>Use for Testing <input type="checkbox"/><br>Poor Information <input type="checkbox"/><br>Rushing <input type="checkbox"/><br>Product Improvement <input type="checkbox"/><br>Process Improvement <input type="checkbox"/><br>Manufacturing Process <input type="checkbox"/><br>Past Due <input type="checkbox"/> | Pressure/Forced <input type="checkbox"/><br>Bending <input type="checkbox"/><br>Centre Not Concentric <input type="checkbox"/><br>Cracks <input type="checkbox"/><br>Crimp/Kink/Ripple/Wave <input type="checkbox"/><br>Cuffs <input type="checkbox"/><br>Crushing <input type="checkbox"/><br>Heat Treat <input type="checkbox"/><br>Wave/Twist in Tube <input type="checkbox"/><br>Marks/Chatter <input type="checkbox"/> | Temperature/Cure <input type="checkbox"/><br>Set-up <input type="checkbox"/><br>BOM/Route <input type="checkbox"/><br>Broken/Damage/Defect <input type="checkbox"/><br>Inspection Incomplete/Unqualified <input type="checkbox"/><br>Contamination <input type="checkbox"/><br>Countersink <input type="checkbox"/><br>Cut Too Short <input type="checkbox"/><br>Instructions Incomplete/Unclear <input type="checkbox"/><br>Drill Holes <input type="checkbox"/> | Power Loss/Surge <input type="checkbox"/><br>Folio/Program <input type="checkbox"/><br>Grain <input type="checkbox"/><br>Weld <input type="checkbox"/><br>Wrong Stock Pulled <input type="checkbox"/><br>Out of Sequence <input type="checkbox"/><br>Off-set <input type="checkbox"/><br>Mislabelled <input type="checkbox"/><br>Fit/Function <input type="checkbox"/><br>Misaligned/off center <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Positioned Wrong <input type="checkbox"/><br>Outside Dimensions <input type="checkbox"/><br>Over/Under tolerance <input type="checkbox"/><br>Part Incorrect <input type="checkbox"/><br>Part Lost/Missing <input type="checkbox"/><br>Part Moved <input type="checkbox"/><br>Drawing <input type="checkbox"/><br>Finish <input type="checkbox"/><br>Misread <input type="checkbox"/><br>Turning Sequence <input type="checkbox"/> | OTHER : <input type="checkbox"/> |                       |                                                 |  |



# Picklist Print

Wednesday, September 02, 2015 2:45:40 PM

Page 1

Work Order ID: 136727

**\*136727\***

Parent Item: D2573

**\*D2573\***

Parent Item Name: Saddle, Aft, Out

Start Date: 9/14/2015

Required Date: 9/14/2015

Start Qty: 8.00

Required Qty: 8.00

Comments: IPP: 1 As Per RevE 06-01-27 JLM

| Component Item ID/<br>Item Name | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per Kit | Total<br>Qty | Qty<br>Issued | Date<br>Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
| D6101-007                       |                        | Manufactured  | No          |                     |                  | 100             | Each               | 44.0000        | 1           | 8            |               |                |        |
| <b>*D6101-007*</b>              |                        |               |             |                     |                  |                 |                    |                | <b>**</b>   |              |               |                |        |
| Saddle Billet                   |                        |               |             |                     |                  |                 |                    |                |             |              |               |                |        |

**DAS**  
**44**  
**9-89** 15/11/09.

| <u>Location</u> | <u>Loc Qty</u> | <u>Loc Code</u> |
|-----------------|----------------|-----------------|
| MAT041          | 36             |                 |
| 131095          | 1              |                 |
| 133547          | 15             |                 |
| * 134678        | 20             |                 |
| MAT044          | 8              |                 |
| 116083          | 1              |                 |
| 120494          | 7              |                 |

136766

→ 2

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

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| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____                                                                                                                                                                                                                                                                                                                                                                                                                                   |  | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                      |  | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Thermoforming <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Cross tube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/><br/>           Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/><br/>           Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Quality <input type="checkbox"/><br/>           Other <input type="checkbox"/> </div> </div> |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                       |                                                                                                                                                                                                                                                                                                                                                                                                                        |  |                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |
| Date :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  | Step #:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  | QTY Effective :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | MRB (QSI042) Approval |                                                                                                                                                                                                                                                                                                                                                                                                                        |  |                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |
| Description Work Order Deviation                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                       | Completed By                                                                                                                                                                                                                                                                                                                                                                                                           |  |                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |
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| Root Cause                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  | FAULT CATEGORY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                       |                                                                                                                                                                                                                                                                                                                                                                                                                        |  |                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |
| Environment <input type="checkbox"/><br>Design <input type="checkbox"/><br>Doc/Data <input type="checkbox"/><br>Equip/Tooling <input type="checkbox"/><br>Handling/Pre <input type="checkbox"/><br>Material <input type="checkbox"/><br>Internal Transport <input type="checkbox"/><br>Tribal Knowledge <input type="checkbox"/><br>LOA <input type="checkbox"/><br>Substation <input type="checkbox"/><br>Past Expiry Date <input type="checkbox"/><br>Misidentified <input type="checkbox"/> |  | No Re-verification <input type="checkbox"/><br>Operator <input type="checkbox"/><br>Offset/Setup <input type="checkbox"/><br>Supplier <input type="checkbox"/><br>Training <input type="checkbox"/><br>Use for Testing <input type="checkbox"/><br>Poor Information <input type="checkbox"/><br>Rushing <input type="checkbox"/><br>Product Improvement <input type="checkbox"/><br>Process Improvement <input type="checkbox"/><br>Manufacturing Process <input type="checkbox"/><br>Past Due <input type="checkbox"/> |  | Pressure/Forced <input type="checkbox"/><br>Bending <input type="checkbox"/><br>Centre Not Concentric <input type="checkbox"/><br>Cracks <input type="checkbox"/><br>Crimp/Kink/Ripple/Wave <input type="checkbox"/><br>Cuffs <input type="checkbox"/><br>Crushing <input type="checkbox"/><br>Heat Treat <input type="checkbox"/><br>Wave/Twist in Tube <input type="checkbox"/><br>Marks/Chatter <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  | Temperature/Cure <input type="checkbox"/><br>Set-up <input type="checkbox"/><br>BOM/Route <input type="checkbox"/><br>Broken/Damage/Defect <input type="checkbox"/><br>Inspection Incomplete/Unqualified <input type="checkbox"/><br>Contamination <input type="checkbox"/><br>Countersink <input type="checkbox"/><br>Cut Too Short <input type="checkbox"/><br>Instructions Incomplete/Unclear <input type="checkbox"/><br>Drill Holes <input type="checkbox"/> |                       | Power Loss/Surge <input type="checkbox"/><br>Folio/Program <input type="checkbox"/><br>Grain <input type="checkbox"/><br>Weld <input type="checkbox"/><br>Wrong Stock Pulled <input type="checkbox"/><br>Out of Sequence <input type="checkbox"/><br>Off-set <input type="checkbox"/><br>Misabeled <input type="checkbox"/><br>Fit/Function <input type="checkbox"/><br>Misaligned/off center <input type="checkbox"/> |  | Positioned Wrong <input type="checkbox"/><br>Outside Dimensions <input type="checkbox"/><br>Over/Under tolerance <input type="checkbox"/><br>Part Incorrect <input type="checkbox"/><br>Part Lost/Missing <input type="checkbox"/><br>Part Moved <input type="checkbox"/><br>Drawing <input type="checkbox"/><br>Finish <input type="checkbox"/><br>Misread <input type="checkbox"/><br>Turning Sequence <input type="checkbox"/> |  |
| OTHER : <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                       |                                                                                                                                                                                                                                                                                                                                                                                                                        |  |                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |

|                                          |                           |
|------------------------------------------|---------------------------|
| <b>DART AEROSPACE LTD</b>                | <b>Work Order:</b> 136727 |
| <b>Description:</b> Saddle, Aft Outboard | <b>Part Number:</b> D2573 |
| <b>Inspection Dwg:</b> D2573 Rev. F      | <b>Page 1 of 1</b>        |

Inspect dimensions highlighted on inspection sheet drawing D2573 Rev. E and record below:

| Dim           | Min   | Max   | Go/No Go Gauge | Recorded Actual Dimensions |        |        |        | By | Date |
|---------------|-------|-------|----------------|----------------------------|--------|--------|--------|----|------|
|               |       |       |                | 1                          | 2      | 3      | 4      |    |      |
| A             | 0.438 | 0.443 |                | .438                       | .438   | .438   | .438   |    |      |
| B             | 1.745 | 1.755 |                | 1.750                      | 1.750  | 1.750  | 1.750  |    |      |
| C             | 3.495 | 3.505 |                | 3.500                      | 3.500  | 3.500  | 3.500  |    |      |
| D             | 1.745 | 1.755 |                | 1.750                      | 1.750  | 1.750  | 1.750  |    |      |
| E             | 7.990 | 8.010 |                | 8.003                      | 8.003  | 8.003  | 8.002  |    |      |
| F             | 0.490 | 0.510 |                | .501                       | .501   | .501   | .501   |    |      |
| G             | 0.257 | 0.262 |                | .258                       | .258   | .258   | .258   |    |      |
| H             | 0.375 | 0.380 |                | .376                       | .376   | .376   | .376   |    |      |
| I             | 0.490 | 0.510 |                | .505                       | .504   | .504   | .504   |    |      |
| J             | 1.174 | 1.184 |                | 1.179                      | 1.179  | 1.179  | 1.179  |    |      |
| K             | 0.558 | 0.578 |                | .572                       | .572   | .572   | .572   |    |      |
| L             | 1.174 | 1.184 |                | 1.179                      | 1.179  | 1.179  | 1.179  |    |      |
| M             | 1.365 | 1.375 |                | 1.370                      | 1.370  | 1.370  | 1.370  |    |      |
| N             | 2.495 | 2.505 |                | 2.500                      | 2.500  | 2.500  | 2.500  |    |      |
| O             | 4.119 | 4.129 |                | 4.124                      | 4.124  | 4.124  | 4.124  |    |      |
| P             | 0.115 | 0.135 |                | .130                       | .130   | .130   | .130   |    |      |
| Q             | 0.115 | 0.135 |                | .127                       | .126   | .127   | .126   |    |      |
| R             | 0.240 | 0.260 |                | .250                       | .250   | .251   | .251   |    |      |
| S             | 0.115 | 0.135 |                | .127                       | .122   | .124   | .123   |    |      |
| T             | 0.178 | 0.198 |                | .188                       | .188   | .188   | .188   |    |      |
| U             | 3.210 | 3.250 |                | 3.230                      | 3.230  | 3.230  | 3.230  |    |      |
| V             | 0.230 | 0.250 |                | .241                       | .240   | .240   | .240   |    |      |
| W             | 0.115 | 0.135 |                | .123                       | .123   | .124   | .125   |    |      |
| X             | 0.308 | 0.313 |                | .311                       | .311   | .311   | .311   |    |      |
| Y             | 0.760 | 0.765 |                | .760                       | .760   | .760   | .760   |    |      |
| Z             | 0.352 | 0.372 |                | .364                       | .363   | .364   | .364   |    |      |
| AA            | 0.470 | 0.530 |                | .500                       | .500   | .500   | .500   |    |      |
| AB            | 0.615 | 0.635 |                | .625                       | .625   | .627   | .628   |    |      |
| AC            | 0.053 | 0.073 |                | .063                       | .063   | .063   | .063   |    |      |
| AD            | 0.240 | 0.260 |                | .251                       | .250   | .250   | .250   |    |      |
| AE            | 1.500 | 1.520 |                | 1.512                      | 1.5135 | 1.515  | 1.514  |    |      |
| AF            | 0.115 | 0.135 |                | .125                       | .125   | .125   | .125   |    |      |
| AG            | 0.240 | 0.280 |                | .270                       | .270   | .270   | .270   |    |      |
| AH            | 0.240 | 0.260 |                | .246                       | .245   | .250   | .247   |    |      |
| AI            | 2.000 | 2.020 |                | 2.0025                     | 2.004  | 2.0045 | 2.0045 |    |      |
| AJ            | 0.023 | 0.043 |                | .033                       | .033   | .033   | .033   |    |      |
| Accept/Reject |       |       |                | ✓                          | ✓      | ✓      | ✓      |    |      |

|                        |
|------------------------|
| Measured by: <u>FK</u> |
| Date: <u>15/11/11</u>  |

|                       |
|-----------------------|
| Audited by: <u>JL</u> |
| Date: <u>15-11-17</u> |

| Rev | Date     | Change                                  | Revised by | Approved |
|-----|----------|-----------------------------------------|------------|----------|
| B   | 02.09.26 | Re-format; Added Rev. D                 | KJ         |          |
| C   | 02.10.11 | Re-format; Added DT8682, DT8683, DT8684 | KJ         |          |
| D   | 05.05.05 | Added dimension AI                      | KJ/RF      |          |
| E   | 05.12.05 | Added dimension AJ                      | KJ/JLM     |          |
| F   | 13.03.07 | Dwg Rev updated                         | KJ         |          |

|                                          |                           |
|------------------------------------------|---------------------------|
| <b>DART AEROSPACE LTD</b>                | <b>Work Order:</b> 136727 |
| <b>Description:</b> Saddle, Aft Outboard | <b>Part Number:</b> D2573 |
| <b>Inspection Dwg:</b> D2573 Rev. F      | <b>Page 1 of 1</b>        |

Inspect dimensions highlighted on inspection sheet drawing D2573 Rev. E and record below:

|               |       |       |                | Recorded Actual Dimensions |       |       |       | By | Date |
|---------------|-------|-------|----------------|----------------------------|-------|-------|-------|----|------|
| Dim           | Min   | Max   | Go/No Go Gauge | 5                          | 6     | 7     | 8     |    |      |
| A             | 0.438 | 0.443 |                | .438                       | .438  | .438  | .438  |    |      |
| B             | 1.745 | 1.755 |                | 1.750                      | 1.750 | 1.750 | 1.750 |    |      |
| C             | 3.495 | 3.505 |                | 3.500                      | 3.500 | 3.500 | 3.500 |    |      |
| D             | 1.745 | 1.755 |                | 1.750                      | 1.750 | 1.750 | 1.750 |    |      |
| E             | 7.990 | 8.010 |                | 8.003                      | 8.004 | 8.004 | 8.003 |    |      |
| F             | 0.490 | 0.510 |                | .501                       | .501  | .502  | .501  |    |      |
| G             | 0.257 | 0.262 |                | .258                       | .258  | .258  | .258  |    |      |
| H             | 0.375 | 0.380 |                | .376                       | .376  | .376  | .376  |    |      |
| I             | 0.490 | 0.510 |                | .505                       | .505  | .506  | .506  |    |      |
| J             | 1.174 | 1.184 |                | 1.179                      | 1.179 | 1.179 | 1.179 |    |      |
| K             | 0.558 | 0.578 |                | .573                       | .572  | .573  | .573  |    |      |
| L             | 1.174 | 1.184 |                | 1.179                      | 1.179 | 1.179 | 1.179 |    |      |
| M             | 1.365 | 1.375 |                | 1.370                      | 1.370 | 1.370 | 1.370 |    |      |
| N             | 2.495 | 2.505 |                | 2.500                      | 2.500 | 2.500 | 2.500 |    |      |
| O             | 4.119 | 4.129 |                | 4.124                      | 4.124 | 4.124 | 4.124 |    |      |
| P             | 0.115 | 0.135 |                | .130                       | .130  | .130  | .130  |    |      |
| Q             | 0.115 | 0.135 |                | .127                       | .126  | .126  | .126  |    |      |
| R             | 0.240 | 0.260 |                | .251                       | .250  | .251  | .250  |    |      |
| S             | 0.115 | 0.135 |                | .123                       | .123  | .123  | .124  |    |      |
| T             | 0.178 | 0.198 |                | .188                       | .188  | .188  | .188  |    |      |
| U             | 3.210 | 3.250 |                | 3.230                      | 3.230 | 3.230 | 3.230 |    |      |
| V             | 0.230 | 0.250 |                | .239                       | .240  | .240  | .240  |    |      |
| W             | 0.115 | 0.135 |                | .123                       | .122  | .124  | .122  |    |      |
| X             | 0.308 | 0.313 |                | .311                       | .311  | .311  | .311  |    |      |
| Y             | 0.760 | 0.765 |                | .760                       | .760  | .760  | .760  |    |      |
| Z             | 0.352 | 0.372 |                | .364                       | .364  | .364  | .364  |    |      |
| AA            | 0.470 | 0.530 |                | .500                       | .500  | .500  | .500  |    |      |
| AB            | 0.615 | 0.635 |                | .627                       | .627  | .627  | .626  |    |      |
| AC            | 0.053 | 0.072 |                | .063                       | .063  | .063  | .063  |    |      |
| AD            | 0.240 | 0.260 |                | .249                       | .250  | .250  | .250  |    |      |
| AE            | 1.500 | 1.520 |                | 1.515                      | 1.515 | 1.515 | 1.515 |    |      |
| AF            | 0.115 | 0.135 |                | .125                       | .125  | .125  | .125  |    |      |
| AG            | 0.240 | 0.280 |                | .270                       | .270  | .270  | .270  |    |      |
| AH            | 0.240 | 0.260 |                | .248                       | .247  | .249  | .247  |    |      |
| AI            | 2.000 | 2.020 |                | 2.005                      | 2.004 | 2.004 | 2.005 |    |      |
| AJ            | 0.023 | 0.043 |                | .033                       | .033  | .033  | .033  |    |      |
| Accept/Reject |       |       |                | ✓                          | ✓     | ✓     | ✓     |    |      |

|              |          |
|--------------|----------|
| Measured by: | F.K.     |
| Date:        | 15/11/13 |

|             |          |
|-------------|----------|
| Audited by: | JL       |
| Date:       | 15-11-17 |

| Rev | Date     | Change                                  | Revised by | Approved |
|-----|----------|-----------------------------------------|------------|----------|
| B   | 02.09.26 | Re-format; Added Rev. D                 | KJ         |          |
| C   | 02.10.11 | Re-format; Added DT8682, DT8683, DT8684 | KJ         |          |
| D   | 05.05.05 | Added dimension AI                      | KJ/RF      |          |
| E   | 05.12.05 | Added dimension AJ                      | KJ/JLM     |          |
| F   | 13.03.07 | Dwg Rev updated                         | KJ         |          |

**SUBJECT TO AMENDMENT**

NO. 136727

MLJ 1509-08

CHAMFER 0.033 x 45°  
ALL AROUND

RELEASE  
2013-01-07

**DETAIL C** C5-  
SCALE 2X

**VIEW B-B** B5-

**D2573 OUTER AFT SADDLE**

**SECTION A-A** D6-1

**D2573 OUTER AFT SADDLE**

**NOTES:**

- 1) MATERIAL: 7075-T7351 PER Q-A-250/12 (REF DART SPEC. D6101-007)  
2) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1  
POWDER COAT WHITE (REF 4.3.5.1) PER DART QSI 005 4.3  
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED  
4) UNITS: INCHES UNLESS OTHERWISE NOTED  
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX  
6) IDENTIFY WITH DART P/N "D2573" AND B/N PER DART QSI 044 6.3  
(CNC ENGRAVING) USE MAX DEPTH OF 0.010 WITH MIN TOOL RAD OF 0.010  
ENGRAVE DART LOGO TO MAX DEPTH OF 0.015 WITH MIN RAD OF 0.125  
7) WEIGHT: 1.07 lbs

|      |                                                             |     |          |
|------|-------------------------------------------------------------|-----|----------|
| F    | D6101-007 WAS D6102-001 REF NCR12-1832                      | SFM | 12.11.13 |
| E    | ADD CHAMFER ON RIDGE, NOTE 5                                | PH  | 05.07.13 |
| D    | ADD RIDGES; TIGHTEN TOLERANCES                              | CP  | 02.09.06 |
| C    | INCCORP. DEC 9123/907/9/120<br>ADD DIMENSIONS PER TSR A1177 | CP  | 99.10.22 |
| B    | ADD GRAIN DIR., 0.438 WAS 0.425                             | CW  | 96.12.02 |
| A    | NEW ISSUE                                                   | BW  | 96.09.16 |
| REV. | DESCRIPTION                                                 | BY  | DATE     |

|               |                    |                                                                                                                                                                                                                                                  |                     |
|---------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| DESIGN        | DS                 | <b>DART AEROSPACE LTD</b><br>HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                         |                     |
| DRAWN         | SFM                |                                                                                                                                                                                                                                                  |                     |
| CHECKED       | <i>[Signature]</i> | DRAWING NO.                                                                                                                                                                                                                                      | REV. <i>[Blank]</i> |
| MFG. APPR.    | <i>[Signature]</i> | D2573                                                                                                                                                                                                                                            | SHEET 1 OF 1        |
| APPROVED      | <i>[Signature]</i> | TITLE                                                                                                                                                                                                                                            | SCALE               |
| DE APPR.      | <i>[Signature]</i> | OUTER AFT SADDLE                                                                                                                                                                                                                                 | NT                  |
| DATE 12.11.13 |                    | COPYRIGHT © 1993 BY DART AEROSPACE LTD<br><small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT NOT BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON OR PERSON OR FIRM</small> |                     |

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